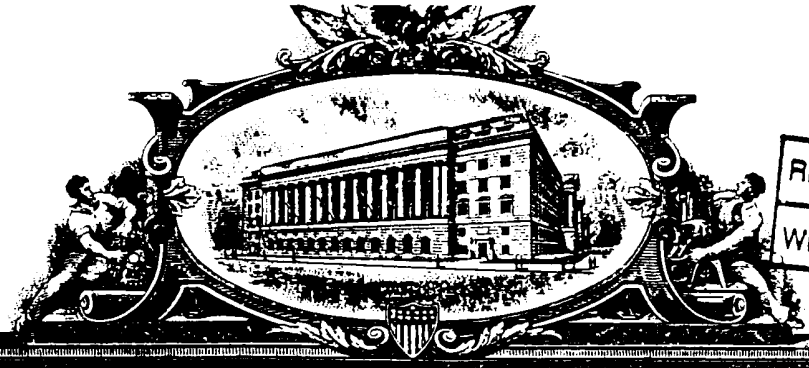

P1 188352

REC'D 14 JAN 2000
WIPO

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

January 10, 2000

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE UNDER 35 USC 111.

PRIORITY DOCUMENT
SUBMITTED OR TRANSMITTED IN COMPLIANCE WITH RULE 17.1(a) OR (b)

APPLICATION NUMBER: *60/142,646*
FILING DATE: *July 06, 1999*
PCT APPLICATION NUMBER: *PCT/US99/26562*

By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

H. PHILLIPS

PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR §1.53(b)(2).

Docket No. 98,675-E	Type a plus sign (+) inside this box:	+

INVENTOR(S)/APPLICANTS(S)

LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (City and either state or foreign country)
Boyce	Keith		Pittsburgh, PA
McKenna	Brian		Pittsburgh, PA
Glick	Phil		Pittsburgh, PA

TITLE OF THE INVENTION (280 character maximum)

Data Management and Presentation Methods

CORRESPONDENCE ADDRESS

McDonnell Boehnen Hulbert & Berghoff
300 South Wacker Drive, Chicago

STATE	Illinois	ZIP CODE	60606	COUNTRY	U.S.A.

ENCLOSED APPLICATION PARTS (check all that apply)

☒ Specification Number of Pages 9 ☒ Small Entity Statement
☒ Drawing(s) Number of Sheets within specification ☐ Other (specify):

METHOD OF PAYMENT FOR THIS PROVISIONAL APPLICATION FOR PATENT

☒ A check or money order is enclosed to cover the Provisional Filing Fee. The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number: 13-2490.	PROVISIONAL APPLICATION FOR PATENT FILING FEE AMOUNT ($)	75.00

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.
__X__ No. _____ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,
SIGNATURE: _____ Date: July 6, 1999

TYPED or PRINTED NAME David Harper REG. NO. 42,636

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

Burden Hour Statement: This form is estimated to take 2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Office of Assistance Quality and Enhancement Division, Patent and Trademark Office, Washington, D.C. 20231, and to the Office of Information and Regulatory Affairs, Office of Management and Budget (Project 0651-00XX), Washington, D.C. 20503. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS; SEND TO: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 98,675-E)

In re Application of:		)	
		)	
	Boyce et al.	)	
		)	Art Unit:
Serial No.:	To be Assigned	)	
		)	Examiner:
Filed:	Herewith	)	
		)	
For:	Data Management and Presentation Methods	)	

Asst. Commissioner for Patents
BOX PROVISIONAL APPLICATION
Washington, D.C. 20231

TRANSMITTAL LETTER

Sir:

1. We are transmitting herewith the attached papers for the above identified new provisional patent application:
   - ☒ Patent Specification (9 pages, including cover sheet, claims, and abstract)
   - ☒ Drawings (within specification)
   - ☒ Return Postcard
   - ☒ Other: Provisional Application Cover Sheet, Verified Statement claiming small entity status
2. ☒ A check in the amount of $75.00 is enclosed for the Filing Fee.

☐ Please charge the total filing fee of $75.00 to our Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.

3. **GENERAL AUTHORIZATION TO CHARGE OR CREDIT FEES:** Please charge any additional fees or credit overpayment to Deposit Account No. **13-2490**. A duplicate copy of this sheet is enclosed.

4. **CERTIFICATE OF MAILING BY "EXPRESS MAIL" UNDER 37 CFR § 1.10:** The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as "Express Mail Post Office to Addressee" in an envelope addressed to: Asst. Commissioner for Patents, Box Provisional Application, Washington, D.C. 20231, on this 6th day of July, 1999.
Express Mail No. EM004668170US

By: _____

CHICAGO, ILLINOIS 60606
TELEPHONE: 312/913-0001

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Cellomics PDServer Application

PDServer Application Overview

In order to maintain sufficient disk space on the Arrayscan™ II instruments, Cellomics has implemented a custom application based on some of the features of the Cellomics™ Store product.

PDServer Application System Features

- Automated data / disk management of Arrayscan™ II Instrument hard drives and a central Server
- Cellomics™ Data Viewer access to all plate and well data from a Windows/NT PC (i.e. the Arrayscan™ PC is not needed for data review)
- Automated backup/off-line archive to tape of all image files and plate databases.
- Automatic spooling of image and data files to a central file server.
- Centralized database of all Plate and Well Data.
- Minimal system administration required.

Data Management Process

1. Arrayscan™ II scans a plate, and writes all image files to the local disk.

2. When a scan is complete, the Watchdog does the following:
   - Exports the plate and well data into the plate.mdb file
   - Creates a directory named "Plateid" (e.g. asn_c_990222100001), and copies the plate.mdb file to the PDServer Application server "plate" directory for the current Day of the week (e.g. \\PDSERVER\JJ_Data\Cellomics\data\plates\tue\ ).
   - Copies all of the image files to the same directory (Archive Bit is ON by Default).
   - Verifies that the copies were successful.
   - Deletes the local files.

3. The PDServer Application server will run the following Daily jobs:
   - Using Seagate Backup Exec, run a daily "Incremental" Backup of the CS_Data\Cellomics\... data directory. The job will change the Archive Bit on every successfully backed up file. A Full backup job will be run weekly.
   - When the tape is full, Backup Exec will issue an alert.

Server Specifications

- PDServer Application Server Specifications
  - Pentium II 450 MHz processor
  - 192 MB RAM
  - 36 GB Shared disk Space for Arrayscan™ data
  - HP SureStore 24e 4mm DDS 3 DAT drive (12/24 GB)
  - Microsoft Windows/NT Server 4.0 w/ Service Pack 4
  - Microsoft SQL Server 7.0 (5 user license)
  - Seagate Backup Exec 7.2

Screening Assumptions

- 1 Arrayscan™ II will be in Standard Mode
- The Screening workgroup will generate a maximum of 9 GB / Day, or a maximum of 45 GB / Week
- Normal state should be 2 days or screening data / images on-line (18 GB or 75 % Full)
- No provisions will be made for automatic recall of image files. The user will be responsible for locating the tape for the day

System Schedule

The system is very flexible, and the regularly scheduled jobs can be set to run at any time of the day. All of the jobs can be run without taking the server off-line; however, for optimum performance it is best to schedule them during the hours of the least system activity.

Daily Image and Data File Backup

- DEFAULT: Scheduled to run 7 days per week at 8:00 AM
- Will take up to 4 hours to backup and verify
- Uses Hardware Compression

- OPTIONS:
- Best Time To Run _____

Daily Database Backup (Store Database)

- DEFAULT: Scheduled to run 7 days per week at 12:00 AM (Store Database)
- Should take less than 5 minutes
- Will run with users and instruments on-line
- Disk level backup. The 4 previous database backup files are kept on disk
- The disk backup file is also copied to tape by the Backup Exec job
- No off-site backups of the database scheduled

- OPTIONS:
- Best Time To Run _____

Daily Database Backup (Master Database)

- DEFAULT: Scheduled to run 7 days per week at 11:00 AM (Master Database)
- Should take less than 1 minute
- Will run with users and instruments on-line
- Disk level backup. The 4 previous database backup files are kept on disk
- The disk backup file is also copied to tape by the Backup Exec job
- No off-site backups of the database scheduled

- OPTIONS:
- Best Time To Run _____

Operating Procedures

In general the PDServer Application server system relies on prepackaged software, such as that from Microsoft and Seagate Software to perform the system administration tasks. All of these products have their individual Help systems and manuals that should be used for detailed questions and Help. The following section will cover specific implementations of the system as set up for the PDServer Application.

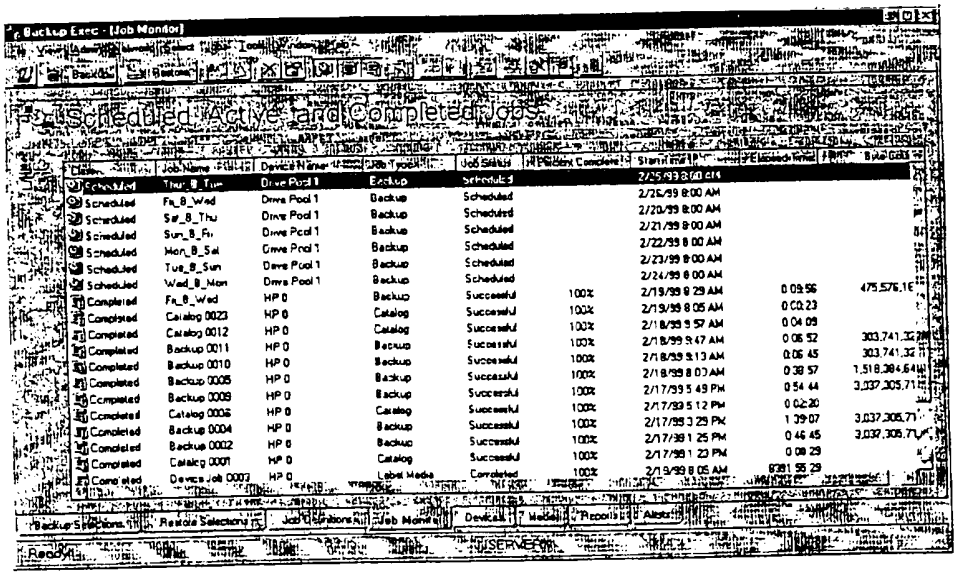
Daily Administration Tasks

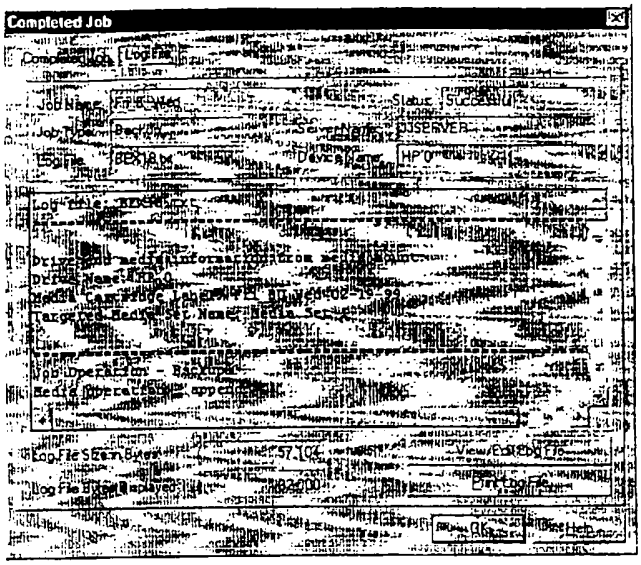
The daily server administration tasks that need to be done should take a system administrator less than 10 minutes, but are critical to ensure overall system and data availability.

Daily Job Verification

File Backup Jobs

Verify the Backup Job, for example by using the ***Job Monitor*** screen of Seagate Backup Exec. The overall success or failure is indicated in the main window. The details of the job are automatically written to a log file. The job log can be reviewed by clicking on the job name that was run with the right mouse button, and selecting properties. The details of the job log are viewable under the Log tab.





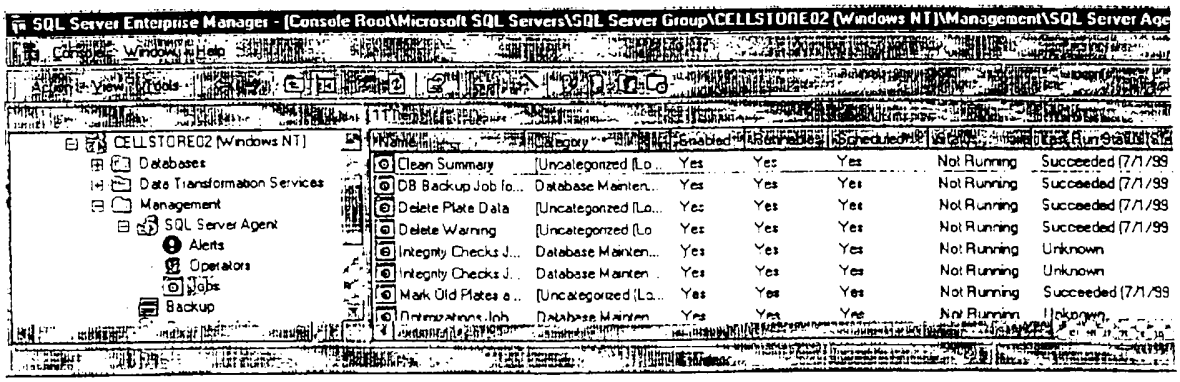
The Backup jobs are scheduled to run at 8:00 AM and should be completed by 12:00 PM, depending on the amount of data backed up. The scheduling is very flexible, and should be customized to run at the least busy time once a screening schedule has been established. The Jobs are named according to the following convention:

Job Name	Day Run	Files Backup Up
Daily Incremental	Tuesday – Friday	\\PDServer\MSSQL7\Backup and \\PDServer\CS_Data\Cellomics\Data\Plates*.*
Weekly Full	Monday	\\PDServer\MSSQL7\Backup and \\PDServer\CS_Data\Cellomics\Data\Plates*.*

File Delete Jobs

Verify the Delete Job using ***Window/NT Explorer*** to review the delete job log. The log is available in the C:\CellStore directory. The file can be reviewed by double clicking on the log file name in the ***Window/NT Explorer*** window.

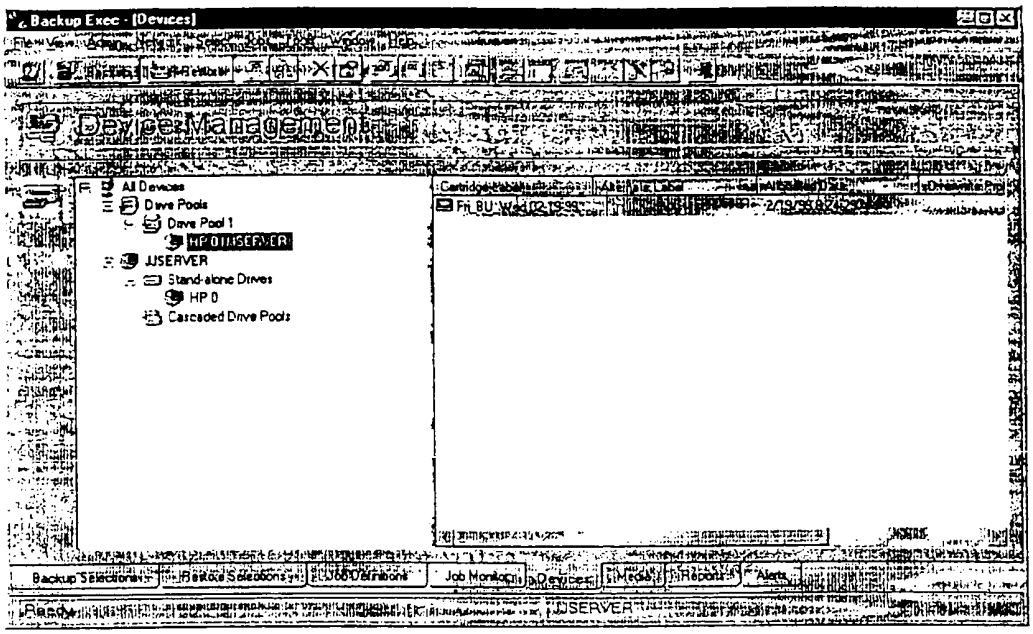
Verify the Database Backup Jobs using the ***SQL Enterprise Manager – SQLServer Agent - Jobs*** window.



Check the "Last Run Status" to confirm that the job succeeded, and that the date corresponds to today's date (since database backups are run daily at 12:00 AM).

Daily Tape Rotation

For example, use the ***Tools*** menu on the ***Devices*** screen of Seagate Backup Exec to perform the following tasks:



Eject the Existing Tape

Eject the existing tape and store in a safe place for recall. Ensure that the label written on the paper label of the tape matches the label written to the media by Backup Exec.

Load New Tape

Load a tape by inserting a blank tape cartridge in the Tape Drive.

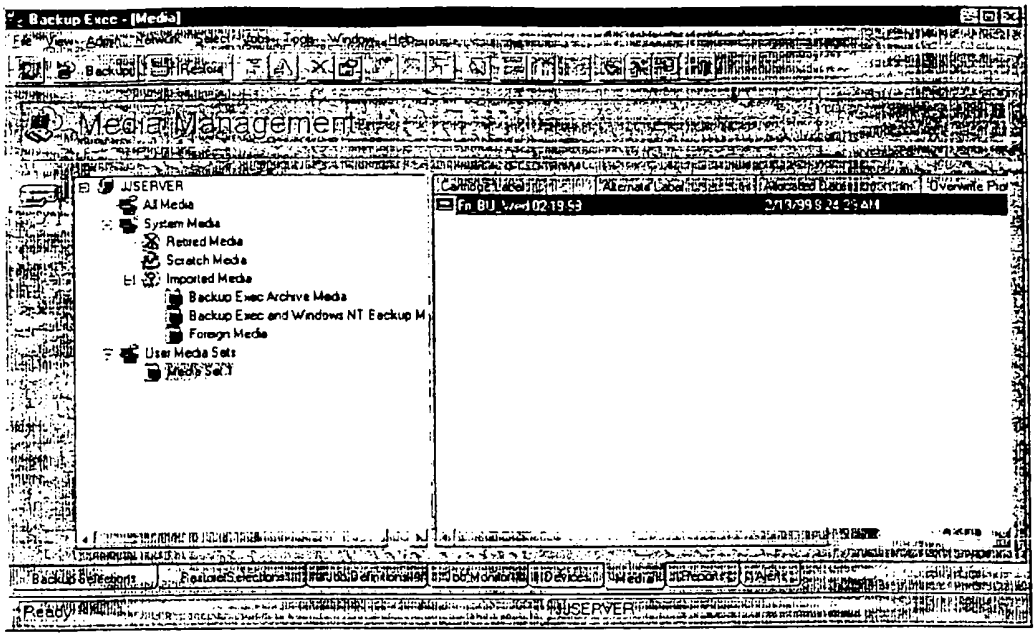
Label New Tape

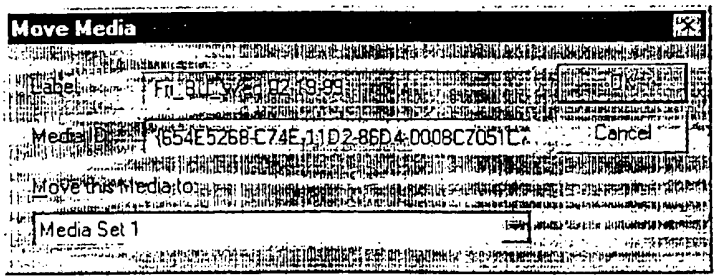
Use the ***Tools*** menu on the ***Devices*** screen to have Backup Exec write a label on the tape. We suggest a naming convention as follows:

*DayRun*_B_*DayBackup Date* (e.g. Fri_B_Wed 1999-02-19).

Relocate Tape to Media Set 1

Since all of the jobs are scheduled to run against Media Set 1, you must now move the newly loaded tape into this media set. Using the ***Media*** screen of Seagate Backup Exec, right mouse click on the new tape media, and move it into Media Set 1.


Backup Exec - [Media]
Media Management
JJSERVER
All Media
System Media
Retired Media
Scratch Media
Imported Media
Backup Exec Archive Media
Backup Exec and Windows NT Backup M
Foreign Media
User Media Sets
Media Set 1
Ready
JJSERVER

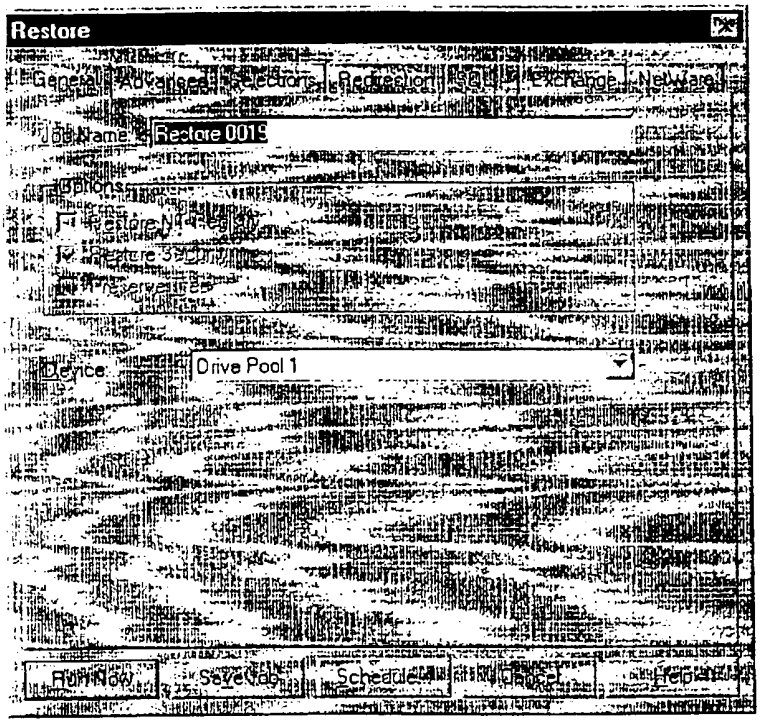

Move Media
Label:
Media ID:
{654E5268-C74E-11D2-86D4-0008C7051C7...
Cancel
Move this Media to:
Media Set 1

Restoring Data from Tape

In order to view data that has been archived to tape it is necessary to restore the data to the server. To restore data from a tape, select to restore a backup job from backup exec.

Launch the Restore Applet

Click on the restore button in the toolbar. This will launch the restore applet.

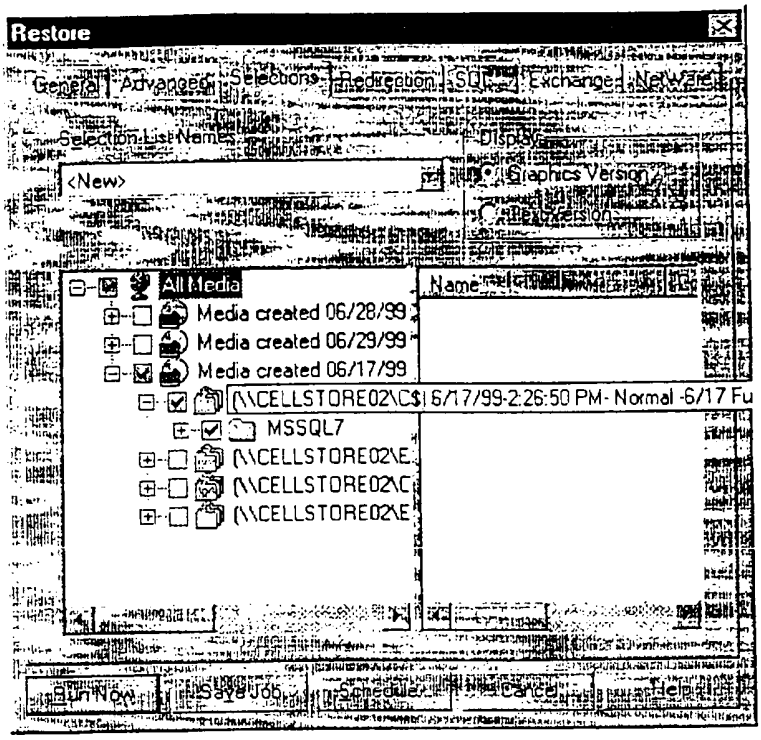


Edit The Job Name

In the General tab, name the restore job in the Job Name textbox. Ignore the advanced tab.

Select the Data You Wish to Restore

In the Selections tab, find the data sets you wish to restore by browsing the "All Media" directory. The data set names have the dates on which the data were archived. These dates can be useful if you are trying to restore a plate from a specific date. Select the data sets you wish to restore by clicking on the checkbox to the left of each data set. The data will automatically be restored with its original directory structure intact.



Start the Restore Job

At the bottom of the applet, click the "Restore Now" button. This will immediately place the restore job in queue.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Attorney's Docket No. 98,675-E)

Applicant or Patentee: Keith Boyce, Brian McKenna, Phil Glick

Serial or Patent No. **To be assigned** Filed: **Herewith**

Title: Data Management and Presentation Methods

VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS (37 C.F.R. § 1.9(f) AND § 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: **Cellomics, Inc.**

ADDRESS OF CONCERN: **635 William Pitt Way**
Pittsburgh, Pennsylvania 15238

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 C.F.R. § 121.12, and reproduced in 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled **Data Management**

[illegible] & BERGHOFF
[illegible] WACKER DR.
[illegible]
TELEPHONE (312) 913-0001

a[illegible] Presentation Methods
[illegible]nventor(s) Keith Boyce, Brian McKenna, Phil Glick

described in

☒ the specification filed herewith.
☐ Application Serial No. filed
☐ Patent No. _____, issued _____.

If the rights held by the above identified small business concern are not exclusive, each individual concern or organization having rights in the invention must file verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR § 1.9(d), or a nonprofit organization under 37 CFR § 1.9(e).

Each person, concern or organization having any rights to the invention is listed below:

☒ No such person, concern or organization exists.
☐ Each such person, concern or organization is listed below.

FULL NAME _____

ADDRESS _____

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

Separate verified statements are required from each named person, concern or organization having rights in the invention averring to their status as small entities. (37 CFR § 1.27).

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

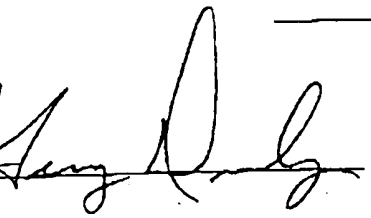
[illegible]
[illegible]
[illegible]
[illegible]CAGO, ILLINOIS 60606
[illegible]

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing therein, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: R Terry Dunlap

TITLE IN ORGANIZATION: Executive Vice President

ADDRESS OF PERSON SIGNING: 635 William Pitt Way
Pittsburgh, PA 15238

Signature: 

Date: 7/6/99

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